

Innovative Cleaning of Crew Clothing by Microwave

Completed Technology Project (2013 - 2013)



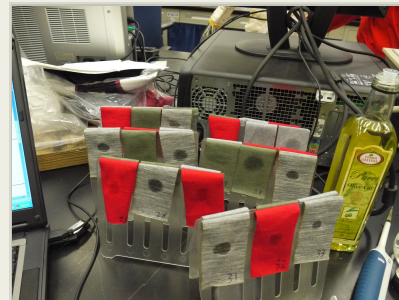
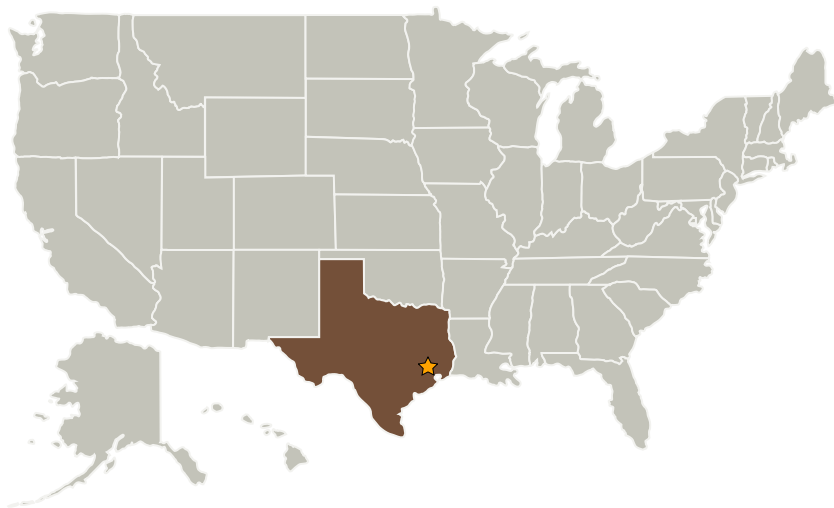
Project Introduction

Currently, there are no in-flight laundry capabilities. All clothing is intended for a single use, and then becomes trash. The ability to launder clothing would dramatically increase the useful lifetime of the item, decreasing the amount of clothing needed for a mission. The result would be a reduction in the up-mass for the mission, and a reduction in the waste volume that needs to be stored in-flight. The innovative laundry method that will be investigated in this study will be cleaning clothes with microwaves. The microwave method uses the heating of dampened clothing by microwaves. Evaporative drying will also occur, which will aid in water recovery. This method will use very little water, and will not use solvents or detergents which would burden a water recovery system.

Anticipated Benefits

a) Sanitizing clothes using microwaves will conserve water, when compared to conventional laundry systems, as very little water is needed for the process. The process will reduce the quantity of waste water that needs to be disposed of or treated.

Primary U.S. Work Locations and Key Partners



Project Image Innovative Cleaning of Crew Clothing by Microwave

Table of Contents

Project Introduction	1
Anticipated Benefits	1
Primary U.S. Work Locations and Key Partners	1
Images	2
Organizational Responsibility	2
Project Management	2
Technology Maturity (TRL)	3
Technology Areas	3

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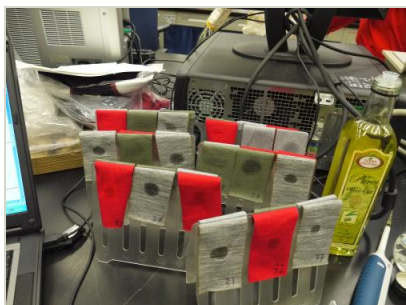


Organizations Performing Work	Role	Type	Location
★ Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
Jacobs Engineering Group, Inc.	Supporting Organization	Industry	Dallas, Texas

Primary U.S. Work Locations

Texas

Images

**12125-1380112176856.jpg**

Project Image Innovative Cleaning of Crew Clothing by Microwave
 (<https://techport.nasa.gov/image/2322>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Center Innovation Fund: JSC CIF

Project Management

Program Director:

Michael R Lapointe

Program Manager:

Carlos H Westhelle

Project Manager:

Dina L Poncia

Principal Investigator:

Dina L Poncia

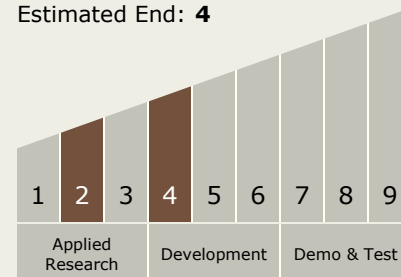
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Technology Maturity (TRL)

Start: **2**
Estimated End: **4**



Technology Areas

Primary:

- TX07 Exploration Destination Systems
 - └ TX07.2 Mission Infrastructure, Sustainability, and Supportability
 - └ TX07.2.1 Logistics Management